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BIENNIAL REPORT  
OF THE  
MOUNTAIN SANITARIUM  
FOR  
PULMONARY DISEASES,

ASHEVILLE, N. C.

BY  
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*Proprietor and Physician-in-Charge.*



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СЕВЕРНАЯ АМЕРИКА

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The Mountain Sanitarium for Pulmonary Diseases was opened June 1st, 1875, with the intention of offering to invalids an Institution, under complete medical control, in a suitable climate. Its foundation is based on the same principles as many similar establishments in Europe, whose constantly increasing patronage and popularity were inducements sufficient to stimulate in overcoming the difficulties always attending the incipiency of a pioneer institution of this character. The locality of Asheville was selected on account of the peculiar climatic advantages offered by the high plateau of Western North Carolina, of which it is the centre. The beneficial influence on consumptives, produced by elevated regions with low barometric pressure, is now conceded by the majority of physicians, and the favorable results obtained at resorts with a certain altitude above sea level corroborate this doctrine. The excessive climate of the eastern part, and of the interior of the United States, made it desirable to locate the Institution in the southern extremity of the Appalachian chain, where alone, in consequence of its geographical position, the required altitude with the smallest thermometrical ranges could be found.

The climate of Asheville, 2,250 feet above the level of the sea, combines, in a happy degree, all these conditions, and therefore offers to patients the best opportunity of a permanent abode during the whole year. Its southerly situation, under  $35^{\circ} 36'$  north latitude, makes the winters mild and pleasant for out-door exercise, whilst the altitude lessens the heat of the summer to such an extent that only very few cooler places can be found on this continent. During a period of ten years the highest temperature was only twice  $89^{\circ}$  (in 1873 and 1876), and once  $90^{\circ}$  in 1871. The temperature in winter rises during mid-day, with few exceptions, to  $50^{\circ}$  and over, and in sheltered places, with southern exposure, where patients congregate, to  $70^{\circ}$  and  $80^{\circ}$  in the sun. The greater number of days in winter have clear and bright sunshine, and insolation being notoriously more powerful in the highlands than in the lowlands, makes out-door life all the more pleasant. The beauty of these bright, cloudless days and their bracing and tonic influence on invalids, can only be realized by actual experience. The average temperature of the last ten years for each month can be seen from the following figures:

DEGREES.	DEGREES.	DEGREES.
January.....38.1	May.....61.5	September.....63.8
February.....39.8	June.....69.1	October.....52.9
March ..... 44.7	July.....71.9	November.....43.8
April.....53.9	August.....70.7	December.....37.3

The diurnal ranges of temperature are extremely small when compared with the high regions of the West; the observations of two years showing only six times a range of  $35^{\circ}$  or over. The rainfall for the year ending June 30th, 1876, was 41.41 inches, and is distributed among the different quarters as follows: 3d quarter, 1876, 12.33 inches; 4th, 5.94 inches. 1st quarter, 1877, 9.22 inches; 2d, 13.92 inches. The average relative humidity of the air for the same period was 69.1 per cent. For the different quarters: 3d, 1876, 82.4 per cent.; 4th, 1876, 65.1 per cent.; 1st,

1877, 61.7 per cent.; 2d, 1877, 67.1 per cent., from which the greater dryness of the air in cooler months is evident. The clearness of the atmosphere, its freedom from all impurities, is highly appreciated by all patients: whilst the beauty and variety of the mountain scenery are great inducements for excursions, which can be made in all directions and are well suited to enliven the depressed mind.

The Sanitarium proper consists of one large two-story house with twenty rooms, dining room and the necessary out-buildings, in addition to which, on account of increased demands, a smaller house in the immediate vicinity, containing eight bed-rooms, has been secured. All the rooms of both houses can be heated, the majority of them having open fire-places; the halls and corridors are warmed by stoves. The rooms are properly ventilated and comfortably furnished; the beds all provided with spring mattresses. In front of the main house is, on each floor, a covered piazza, seventy-two feet long and nine feet wide, admirably adapted for patients for out-door life and enabling the weakest invalids to spend their time in the open air without exertion.

Price for board from \$10.00 to \$12.00 per week; charge for medical attention according to the condition of the patient.

The management of the house is under entire medical control, and carried on with especial view to meet the wants of invalids. The greatest attention is paid to the table, as wholesome, nutritious diet is most essential to patients, and, to judge from the opinions of all the inmates, the efforts in this direction are giving full satisfaction. It is always the endeavor to make the social life of the Institution as pleasant as possible, and ample provisions are made for the entertainment of guests during rainy or disagreeable weather.

The society, comprising always an equal or even larger number of well people, does not bear the appearance of a congregation of invalids; and invariably patients, who hesi-

tated to visit the Sanitarium on this account, become converted to exactly the opposite view; they heartily appreciate the value of being in the Institution. "The consumptive must live under the constant supervision of a strict, conscientious physician, if favorable results are to be obtained," is a quotation from the late F. Niemeyer. Patients know generally very little of what does them good or what hurts them, and it requires a careful study and an untiring attention to all the surroundings of a patient if we would have him use all the proper hygienic and other remedies in the right way. A supervision of this kind can only be successfully carried out when the physician is constantly with his patients, and if used with discretion, is never objected to by them; on the contrary, as soon as they gain confidence in the physician, they like it and depend upon it.

By these combined climatic, hygienic and social advantages, the medical results in the treatment of invalids have been very favorable, and will well bear comparison with results obtained at other health stations. The Sanitarium was visited in the first year, ending May 31st, 1876, by fifty-one guests, staying altogether 3,548 days, or in average,  $69\frac{1}{2}$  days, amongst whom were twenty-one patients, sixteen of them being consumptives. The second year the Institution was visited by eighty-two guests, staying altogether 5,717, or in average  $69\frac{1}{4}$  days, amongst whom thirty-three patients, twenty-seven being consumptives. The twenty-one patients of the first year remained in average eighty-six days, the thirty-three of the second year eighty-nine days, a comparatively very short time for the treatment of such a chronic disease as consumption. Although the number of patients may appear to be small, yet the patronage of the Institution ought not to be judged by their number, but by that of the days the guests remained in the house (3,548 and 5,717 respectively). The frequentation of the establishment also compares favorably with that of

the now probably most popular resorts of this kind in Europe when first opened, Davos (Switzerland) and Goerbersdorf (Silicia). Davos was visited in the first year (1865) by eight patients; five years later, only by fifty-five, whilst by four hundred in December, 1874. Goerbersdorf was opened 1854 with twelve patients, and had, in 1860, sixty, whilst in 1873, five hundred and seventy-four; in 1874, five hundred and thirty-three; in 1875, five hundred and eighty patients remained there.

The by far greatest majority of patients was sent by physicians; the greatest number, by any one physician, by Dr. A. L. Loomis of New York. By his advice three patients came in the first, nine in the second year. So far most patients in winter came from the Northern or Western, in summer from the Southern States. But as the climate of this locality is suited for the treatment of invalids the whole year round, it is desirable that the patients come as soon as the existence of their disease becomes known in order to enable them to avail themselves, as soon as possible, of the advantages of the Institution.

The following two tables exhibit the medical results for each year, and are made up with scrupulous accuracy, as the greatest care and pains are taken to classify no patient as better than his actual condition was at the end of the year. Every physician who sent patients to the Sanitarium is gladly welcomed to information how his patients are classified. It is necessary to remark here, that the classes into which the patients are arranged are not quite identical with the common usage, and are made up more in harmony with the clinical aspect of the cases than with the strict pathologico-anatomical condition. The first class embraces patients with catarrh of the apex and infiltrations of the smallest extent; the second, such with extended infiltrations or small destructions with preserved general constitution; the third, such with extended infiltrations with hectic symptoms, cavities, constitution broken down. The fourth

class contains patients with acute miliary tuberculosis; the fifth, all such with different diseases.

Patients who were either considered cured or who experienced very decided improvement, are ranged under the same heading. It was feared to call any patient cured who, on account of the youth of the Institution, was under observation only two years or less; as a lapse of several years, without return of the disease, is necessary in order to pronounce a patient radically cured.

YEAR.	CLASSES.	Number of Patients.	Cure or very decided improvement.	Improvement.	No improvement.	Growing worse.	Death.
1875-76.	I.....	5	5	—	—	—	—
"	II.....	2	—	1	—	1	—
"	III.....	5	1	—	2	1	1
"	IV.....	4	—	—	—	3	1
"	V.....	5	1	1	2	1	—
	Total..	21	7	2	4	6	2
1876-77.	I.....	7	6	1	—	—	—
"	II.....	12	3	4	3	2	—
"	III.....	8	1	1	3	2	1
"	IV.....	—	—	—	—	—	—
"	V.....	6	1	2	2	—	1
	Total..	33	11	8	8	4	2

From the above tables it will be seen that in the first year seven out of sixteen consumptives, viz.:  $43\frac{12}{16}$  per cent., or with omission of the four cases of miliary tuberculosis, which is necessarily fatal, seven out of twelve, viz.,  $58\frac{4}{12}$  per cent. improved. The second year shows sixteen improvements among twenty-seven consumptives, viz.:  $59\frac{7}{27}$  per cent. If we bear in mind that 1875-76, five, and 1876-77, eight patients, viz., very nearly one-third of all cases, belonged to the third class, the results will still look more favorable, especially in consideration of the short time of the treatment (eighty-six and eighty-nine days respectively). It is to be remarked that the patients who remained longest of all in the Institution experienced most improvement. This is the case with eleven patients of the second year who remained in average one hundred and twelve

days. All the patients of the first class were either decidedly improved, or several of them, of whom trace could be kept, can be pronounced cured, as their own family physicians declare them to be so, with but one exception, where an intercurrent disease interfered with the improvement.

This result ought to encourage physicians to send their patients as early as possible to the Institution, as then the most favorable changes are open for the patient. The four deaths which occurred were due in one case to acute miliary tuberculosis; in another, to very extended infiltration, in a young lady who, already at her arrival, was so weak that she was unable to walk even the shortest distance. The third death was a case of galloping consumption, and the fourth, in consequence of chronic disease of the uterus.

The consumptives did not present any special clinical features, but the history of one patient of the fifth class may be found worthy of mentioning. It was a case of empyema in a gentleman six feet high, from whom, by five aspirations with Dieulafoy's aspirator, two hundred and sixty-eight ounces (over two gallons) pus were removed within four weeks. As the formation of pus did not diminish one month after the first aspiration, a trocar was inserted in the pleura, and the cavity, which proved to hold forty ounces, washed out twice a day. Although different remedies were used for this purpose, and six to ten cleanings were made each time, the fluid never ran out clear, but was always mixed with pus. It was, therefore, concluded to enlarge the wound and to insert two catheters, which simplified the washing out very much and facilitated thorough cleaning of the pleural cavity. The wound was kept open with a large seton, made new from linen every time. This means of keeping the wound open overcame, in the most perfect manner, the difficulty mentioned by authors; and proved to be more satisfactory than the hard, unyielding silver canula described in Ziemssen's Encyclopedia for this purpose. At this time, end of September,

1876, the patient weighed 120 pounds; November 15th, 133½; December 31st, 149; January 14th, 1877, 155 pounds. The treatment was continued up to the day of the departure of the patient, in June, 1877, when he weighed 160 pounds (usual weight in health 165 to 170 pounds). The cavity, which first held forty ounces, had decreased to the capacity of four ounces, his strength was fully re-established, and his lung, which, at one time, was completely collapsed, had begun to inflate again. Letters received since this time show continuance of improvement.

It may not be out of the way to mention the different routes which lead to Asheville. Invalids from the North leave the Piedmont Air Line at Salisbury, N. C., and take the Western North Carolina Railroad, running daily, except Sunday, to Henry, where they will find comfortable stages to Asheville, twenty-one miles distant. If desired, and previous notice sent to this effect, they can be brought from Henry in private hacks, which will enable even the weakest invalid to travel with ease and comfort. For people from the West, the shortest route is via Morristown, Tenn., to Wolf Creek, the Western Railroad terminus, whence are forty-six miles staging to Asheville. Should they prefer to avoid the latter, they also can come by way of Washington, D. C., and thence south to Salisbury. The shortest route from the South is by way of Atlanta, Ga., to Spartanburg, S. C., thence by the new Spartanburg and Asheville Railroad, which, at present, has its terminus forty miles from here, but will, next spring, be at Hendersonville, twenty miles from Asheville. The Western Union Telegraph Company has an office here, five minutes walk from the Sanitarium. Invalids will find a very kind, social population, full of sympathy for the sick stranger in their midst, and always glad to assist him in any way they can. Nothing of political sentiments against Northern people can be found here, and all the surroundings are such as to be best adapted for a home for invalids.



